Office of the Surgeon General

Teleconsultation Program

For

Deployed Healthcare Professionals

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Image

Referring Physician Narration

BLUF: If advanced medical care was available, I suspect the following patient would be inoperable and likely referred to palliative care.
Wanted to run it by the experts to see if you recommend referral to anywhere in theater that might be able to help the patient.

HPI: Today our ECP stated they had a local national at the gate with an eye injury. I authorized the patient to be brought to the Aid Station.
On arrival, I noted a 60+ y/o male with an left periorbital mass. With the use of a medical interpreter, I slowly was able to collect a basic history. Approximately 12 to 18 months prior to presentation, the patient states he had a "small bump around his left eye". Due to poor medical resources in XX, the patient states he traveled to YY where he had surgery. His eye was surgically removed and he stated, "no cancer". He returned to XX from YY and states the small lesion slowly grew into what was noted on exam today. The lesion bleeds, but is minimally painful. He states he has been having progressively worsening right sided temporal headaches.

PMHX: None reported PSHX: enucleation surgery OD eye
RX: None ALL: NKDA

Exam:
V/S unremarkable. VA in OS eye- could not be tested with snellen but appeared able to see small pictured objects.
L periorbital area: noted to have a large mass as noted in attached picture. The orbit was filled with gauze.
Neuro: CN exam- I not tested. II in OS eye grossly unremarkable. III, IV, VI in OS eye unremarkable. V, VII- sensation absent over mass lesion. Able to wrinkle forehead bilaterally. Smile symmetrical.
VIII, IX, X- R ear was occluded with cerumen with some involvement of the mass of the anterior ear canal. Tongue and palatal movement unremarkable.

A/P Squamous Cell CA vs basal Cell CA vs Melanoma vs ? We had the XX transport the patient to the local hospital, but the patient states he has already been there and was told there was nothing that could be done. Due to the vacularity in a CA lesion, I suspect that any debulking surgery would meet high morbidity and mortality. Any ideas?

1st Ophthalmologist's Recommendation / Dx

It looks like advanced squamous cell carcinoma (less likely basal cell carcinoma. Given the advanced stage it is likely that it has metastasized. It could be debulked, but there is no curative surgery. He could try chemotherapy, but the chances for success are slim.
If it is basal cell CA it rarely metastasizes and he could have MOHS surgery to remove the tumor.
I would take a generous biopsy and send it to pathology. If it is squamous cell CA I would refer to palliative care. If it is basal cell Ca then he could be referred to oculoplastics and have surgery.

Problem

- **Deployed Healthcare providers deployed did not have a standardized methodology to receive expert teleconsultation services**
- **Providers contacted colleagues at their home station**
- **Reserve Component providers contacted colleagues at civilian facilities**
- **Providers unnecessarily evacuated patients they could have treated at their location with expert consultative assistance**

Objective

- **Develop a user-friendly enterprise teleconsultation system to support deployed medical personnel**

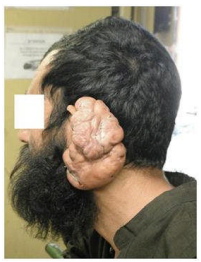
Solution

- **Army Knowledge Online (AKO) Email in Support of Electronic Medical Consultation by Deployed Providers**

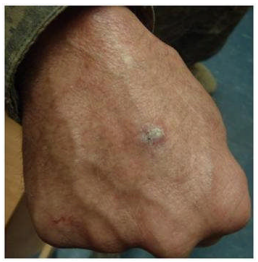
➢ **OTSG/MEDCOM Policy Memo 09 - 034 dated 4 June 2009 (Under Revision)**

Overview of OTSG Telemedicine Teleconsultation System

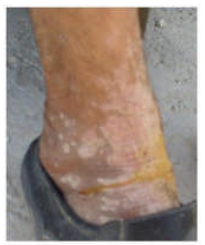
- **Functional Proponent: OTSG Medical Informatics Consultant**
- **Selected specialties organized with email utility groups**
- **Specialty Medical Consultants supervise their respective teleconsultation service, ensure the scheduling and availability of medical staff with consultants from all branches**
- **Program oversight by a Project Manager**
  - **Manages requests for specialties not organized by utility group**
  - **Evaluates specialties for development into utility groups**
  - **Provides monthly reports to the Functional Proponent**



Keloid



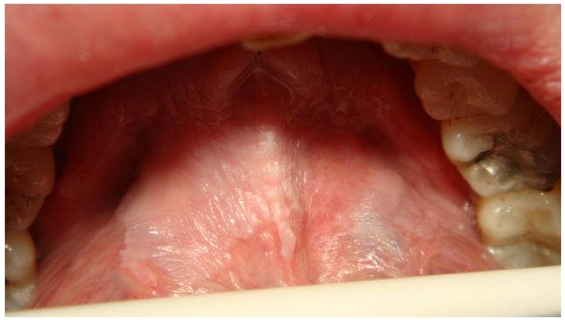
Squamous Cell Carcinoma



Lichen Simplex Chronicus

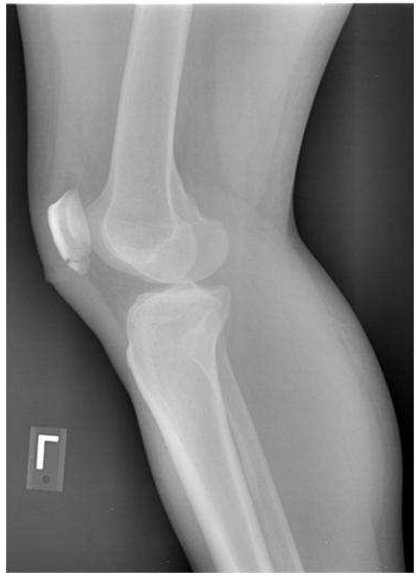
Overview of OTSG Telemedicine Teleconsultation System

- **Not available to**
  - **Providers in CONUS**
  - **OCONUS fixed – based facilities**
  - **Individual patients and their families**



Epithelial Dysplasia

- **No restrictions on patient branch of service or nationality**
  - **If the patient comes to your clinic and you need assistance send the consult**
  - **Available to MEDCAP patients**
- **Consults are answered every day of the week including weekends and holidays**
- **Project Manager receives all teleconsultations and serves as the gatekeeper**

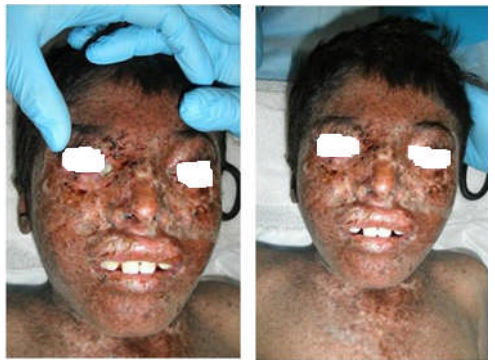


Patellar Fracture

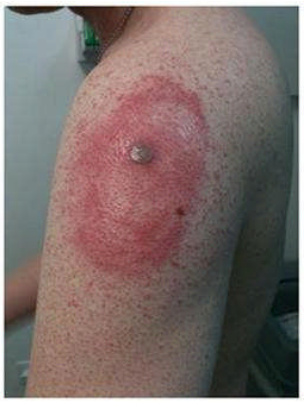
Overview of OTSG Telemedicine Teleconsultation System

- **Program Advantages**
  - ➢ **Ease of operation**
    - ✓ **NIPRNET ... Store – and – Forward**
  - ➢ **Rapid response ... many answered within 5 hours**

Xeroderma Pigmentosa



- **Program Advantages**
  - ➢ **Obtain a diagnosis, treatment options, how – to / what – if**
- **Depending on the tactical situation may be the safest way to obtain medical advice**
- **On – line collaboration between specialties**
- **Consultants are often the experts in their field**



Vaccine Reaction

Summary

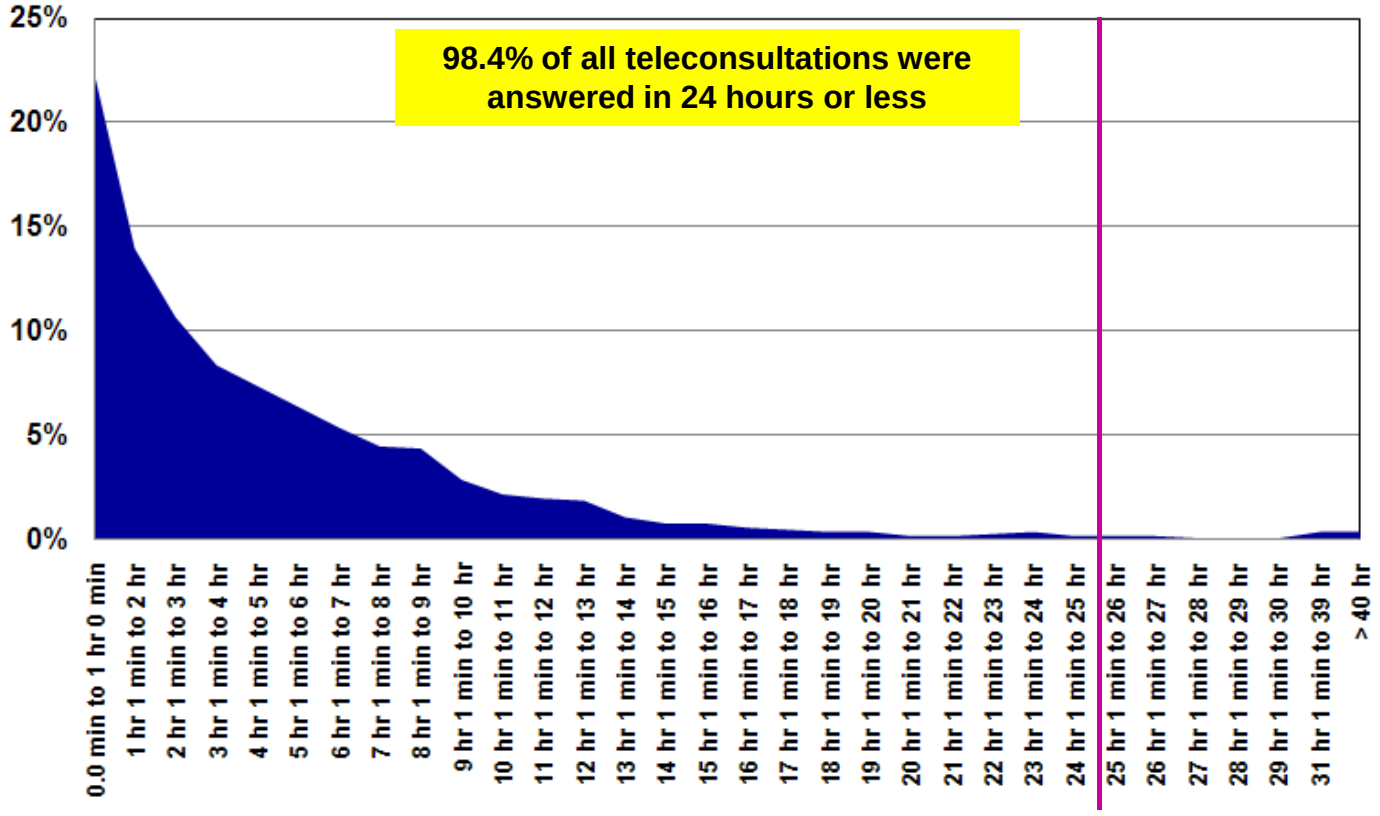
- **Program Summary**
  - **19 specialties with contact groups: xxx.consult@us.army.mil**
  - **9,149 teleconsultations (Apr 04 to Jun 11 – 87 months)**
  - **104 known evacuations prevented**
  - **408 known evacuations facilitated following consultant's recommendation**
  - **2,259 different referring health care professionals**
  - **1,075 teleconsultations on non - US patients**
  - **Average Reply Time 5 hr 7 min**

Year	Reply Time
2004	5 hr 9 min
2005	5 hr 16 min
2006	5 hr 12 min
2007	5 hr 8 min
2008	4 hr 58 min
2009	5 hr 11 min
2010	4 hr 52 min
2011	5 hr 00 min
Jun 11	6 hr 40 min
Program	5 hr 7 min

Non-U.S. Patients			
Country	Consults	Country	Consults
Afghanistan Army	48	India Army / Police	1
Afghanistan Detainee	11	India Contactor	20
Afghanistan Non-Combatant	327	Iraqi Military	48
Australian Army	3	Iraqi Civilian	307
Australian Navy	2	Iraqi Detainee	86
Bangladesh Contractor	1	Italian Navy	2
Bosnian National	3	Jordanian Contractor	1
Bosnian Contractor	2	Jordanian Soldier	1
Bosnian Officer	1	Kenya National	6
Botswana Child	1	Korean	6
British Air Force	3	Kyrgyzstan Contractor	1
British Contractor	2	Laotian National	3
British Soldier	2	Macedonian Soldier	5
Bulgarian Army	3	Mauritania National	1
Canadian Contractor	1	Nepalese Contractor	8
Canadian Soldier	20	Netherland Army	1
Canadian Navy	2	New Zealand Contractor	1
Columbia National	5	Pakistan	30
Congo Child	1	Philippine National	21
Denmark Contractor	1	Poland Army	2
Djibouti National	3	Romanian Contractor	1
Dutch Army	4	Romanian Soldier	1
Egyptian Contractor	1	Russian AFEES Contractor	1
Ethiopian National	3	Saudi Detainee	1
Fijian Contractor	4	Scottish Civilian	2
Georgia Contractor	1	SE Asian (not specified)	1
German Child (in Turkey)	1	Sierra Leon Contractor	1
Ghana National	3	Somalia Child	1
Guatemala Child	1	South Africa Contractor	2
Haitian National	2	Sri Lanka Contractor	2
Hungarian Army / Police	12	Turkey Contractor	3
Hungarian Contractor	1	Uganda National	33
Total			1,075

Reply Times Summary

Reply Time Percentages



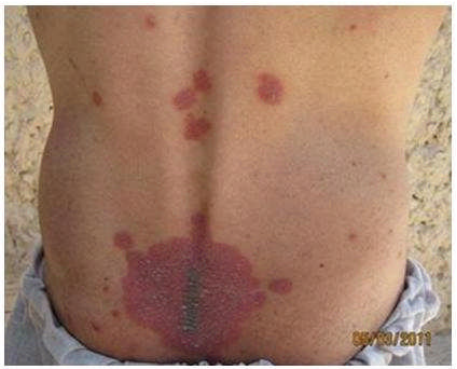
15 min or less	5.5%
16 to 30 min	6.6%
31 to 45 min	5.7%
46 to 60 min	4.8%
Total ≤ 60 min	22.6%

Time	%
0.0 min to 1 hr 0 min	22.50%
1 hr 1 min to 2 hr	14.00%
2 hr 1 min to 3 hr	10.70%
3 hr 1 min to 4 hr	8.40%
4 hr 1 min to 5 hr	7.40%
5 hr 1 min to 6 hr	6.40%
6 hr 1 min to 7 hr	5.40%
7 hr 1 min to 8 hr	4.50%
8 hr 1 min to 9 hr	4.40%
9 hr 1 min to 10 hr	2.90%
10 hr 1 min to 11 hr	2.20%
11 hr 1 min to 12 hr	2.00%
12 hr 1 min to 13 hr	1.90%
13 hr 1 min to 14 hr	1.10%
14 hr 1 min to 15 hr	0.80%
15 hr 1 min to 16 hr	0.80%
16 hr 1 min to 17 hr	0.60%
17 hr 1 min to 18 hr	0.50%
18 hr 1 min to 19 hr	0.40%
19 hr 1 min to 20 hr	0.40%
20 hr 1 min to 21 hr	0.20%
21 hr 1 min to 22 hr	0.20%
22 hr 1 min to 23 hr	0.30%
23 hr 1 min to 24 hr	0.40%
24 hr 1 min to 25 hr	0.20%
25 hr 1 min to 26 hr	0.20%
26 hr 1 min to 27 hr	0.20%
27 hr 1 min to 28 hr	0.10%
28 hr 1 min to 29 hr	0.10%
29 hr 1 min to 30 hr	0.10%
31 hr 1 min to 39 hr	0.40%
> 40 hr	0.40%

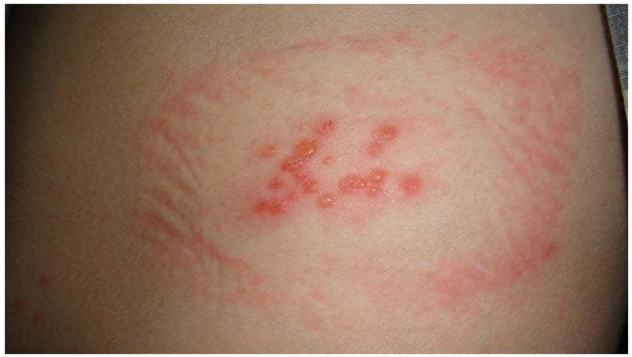
Program Summary

- **Specialties with utility groups**
  - **Burn-trauma: burntrauma.consult@us.army.mil**
  - **Cardiology: cards.consult@us.army.mil**
  - **Dermatology: derm.consult@us.army.mil**
  - **Dental: dental.consult@us.army.mil + 7 sub-groups**
  - **Infectious Diseases: id.consult@us.army.mil (linked to Prev Med)**
  - **Infection Control: infect.cntrol.consult@us.army.mil**
  - **Internal Medicine: im.consult@us.army.mil**
  - **Microbiology / Laboratory: microbiology.consult@us.army.mil**
  - **Nephrology: nephrology.consult@us.army.mil**
  - **Neurology: neuron.consult@us.army.mil**
  - **Ophthalmology / Optometry: eye.consult@us.army.mil**

Psoriasis



Herpes Simplex Virus

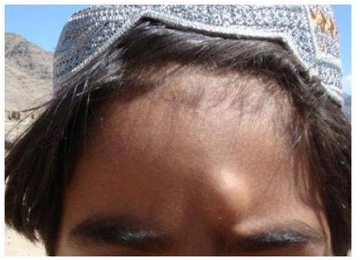


Program Summary

- Orthopedics / Podiatry: ortho.consult@us.army.mil
- Pediatrics Intensive Care: picu.consult@us.army.mil
- Preventive Medicine: pmom.consult@us.army.mil
- Rheumatology: rheum.consult@us.army.mil
- Toxicology: toxicology.consult@us.army.mil
- Traumatic Brain Injury: tbi.consult@us.army.mil
- Sleep Medicine: sleep.e.consult@us.army.mil
- Urology: urology.consult@us.army.mil

- **Other Specialties "as requested"**
  - Allergy
  - Endocrinology
  - ENT
  - Flight Medicine
  - Gastroenterology
  - General Surgery
  - Hematology
  - Legal
  - Neurosurgery
  - OB-GYN
  - Oncology
  - Pharmacy
  - Plastic Surgery
  - Psychiatry
  - Radiology
  - Speech Pathology
  - Vascular Surgery
  - Vaccine Centers Networks

- **Contact Project Manager for assistance**
  chuck.lappan@us.army.mil



Sub-Cutaneous Lipoma

AKO Teleconsultation Program Business Practice For Deployed Providers

Provider sends f/u or questions/info to group

Deployed Provider emails consultation

Specialty with Contact Group

Yes

No

Include help.consult@armedd.army.mil *in the "cc" address*

-----Original Message-----
From: ZZZZZ, XXXXX MAJ
Sent: Monday, May 28, 2007 10:00 PM
To: XXXXXXX
Subject: RE: Teleconsultation

COL XXXXX

The lesion appears to be a prurigo nodule. They occur from repeated scratching rubbing. Many times it is formed from habit alone, but also they they can occur from a primary lesion (such as a wart, insect bite, other). You have many treatment options. You can try a trial of cryotherapy (5 second freeze), shaving the lesion off, intralesional kenalog, topical steroids are among the most commen forms of treatment. The main goal is to get the patient to leave the lesion alone. Thank you for the consult.

Respectfully,

XXXXXX XXXXXXX MD
MAJ, MC, USA
Chief, Dermatology
XXXXXXX

-----Original Message-----
From: XXXX XXXXXXX
Sent: Tuesday, May 29, 2007 2:31 AM
To: 'derm.consult@us.army.mil'
Subject: Teleconsultation

In any case, the attached images are of a 47 y/o healthy male with a recurring (several months) 4 mm scar on posterior wrist, ulnar aspect.

Patient kept scratching it and when saw primary provider stateside (before deploying), provider said it was from the irritation and leaving it alone would make it go away.

Now after several months the lesion recurs (no worse than original, no spreading), patient continues to pick at it when the central core spreads to about 3 mm (since it itches).

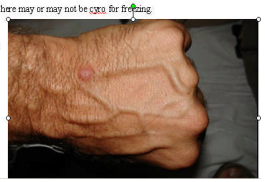
No treatments were attempted, no labs obtained. There may or may not be cyto for freezing.

DDx: 1. Wart
2. Scar that recurs due to patient irritation.

Thank you very much, in advance, for this great pr <<DSC05694JPG>> ogram. It is nice to be in theater, knowing you do what you do.

Les

XXXXX XXXXXX
Col, USAF, MC



Consultant emails recommendation to the deployed physician

Teleconsultation is routed to the appropriate specialty group

Teleconsultation emailed to Referral Manager

Finds consultant with appropriate expertise

Consultant retrieves and reviews teleconsultation

Copy furnished to specialty group… confirms teleconsultation is answered and enables collaboration

Locations Submitting Teleconsultations

http://www.cia.gov/cia/publications/factbook/reference_maps/pdf/time_zones.pdf

Map as of 1 July 2011

Supported Facility

Afghanistan	Chad	Ghana	Kuwait	Pakistan	Turkmenistan
Albania	Continental US	Guam	Kyrgyzstan	Peru	United Arab Emirates
Bahrain	Djibouti	Guatemala	Laos	Philippines	US, Canadian & Australian Navy afloat
Belgium	Ecuador	Guinea	Mali	Qatar	
Belize	Egypt – MFO Sinai	Hurricane Katrina	Mauritania	Senegal	Yemen
Bosnia	Haiti Relief	Iraq	Morocco	Spain	
Botswana	Honduras	Italy - Sicily	Nepal	Thailand	
Congo	Germany	Kenya	Okinawa	Turkey	

Quick Summary

Top Specialties FY11
xx.consult@us.army.mil

Dermatology: 31%
Orthopedics: 12%

Top Locations FY 11

Afghanistan: 42%
Iraq: 28%
Navy Afloat: 11%

Top "Other Specialties" FY11

Otolaryngology
Allergy
OB-GYN

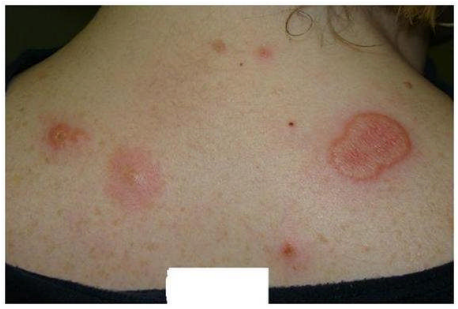
FY 11

Afghanistan % Consultations		
Oct	Nov	Dec
38%	30%	43%
Jan	Feb	Mar
43%	28%	42%
Apr	May	Jun
46%	52%	47%

Navy % Consultations		
Oct	Nov	Dec
7%	11%	4%
Jan	Feb	Mar
9%	16%	19%
Apr	May	Jun
13%	12%	6%

Top Patient Branch FY 11

Army: 58%
Navy: 13%
Non-Combatant: 9%



Smallpox Vaccinia

Evacuations Summary

Evacuations Prevented Following Teleconsultation		
Summary	Number	%
Audiology	1	1%
Burn Trauma	1	1%
Cardiology	6	6%
Dermatology	46	44%
Endocrinology	1	1%
Gastroenterolgy	1	1%
Hematology	1	1%
Infectious Diseases	3	3%
Internal Medicine	1	1%
Mental Health	1	1%
Nephrology	3	3%
Neurology	3	3%
Neurosurgery	2	2%
OB-GYN	2	2%
Ophthalmology	4	4%
Orthopedics	18	17%
Otolaryngology	1	1%
Radiology	1	1%
Rheumatology	4	4%
Urology	4	4%
Total	104	

Based on some feedback from one deployed provider, this figure is probably under-stated.

Evacuations Facilitated Following Teleconsultation		
Summary	Number	%
Allergy	2	0.5%
Burntrauma	4	1%
Cardiology	42	10%
Dermatology	39	10%
Dental	2	0.5%
Endocrinology	13	3%
Gastroenterology	11	3%
General Surgery	3	1%
Gyncology	1	0.2%
Hematology	3	0.7%
Infectious Diseases	13	3%
Internal Medicine	19	5%
Nephrology	17	4%
Neurology	93	23%
Neurosurgery	2	0%
Oncology	1	0%
Ophthalomogy	18	4%
Orthopedics	55	13%
Otolarynology	7	2%
Pulmonary Diseases	4	1%
Rheumatology	18	4%
Sleep Medicine	1	0.2%
TBI	8	2%
Urology	31	8%
Vascular Surgery	1	0.2%
Grand Total	408	

Detailed Summary - Specialties With Formal Groups

	Total Consults By FY									
	2004 Totals	2005 Totals	2006 Totals	2007 Totals	2008 Totals	2009 Totals	2010 Totals	2011 Totals	Program Totals	% Consults Program
Burn-Trauma		23	24	19	32	31	13	15	157	2%
Cardiology		2	67	41	61	67	84	30	352	4%
Dental						14	15	19	48	0.5%
Dermatology	321	543	528	467	562	526	560	422	3,929	43%
Infection Control						11	11	13	35	0.4%
Infectious Diseases		82	110	106	100	110	110	79	697	8%
Internal Medicine				34	50	57	64	48	253	3%
Microbiology						8	7	3	18	0.2%
Nephrology		13	18	33	30	29	20	16	159	2%
Neurology				78	123	145	123	101	570	6.2%
Ophthalmology	10	51	38	54	70	65	56	51	395	4%
Orthopedics				11	105	169	142	167	594	6.5%
Pediatrics		8	21	27	24	20	15	6	121	1%
Prvt Med			3	13	13	25	26	22	102	1.1%
Rehabilitation			1					0	1	0.0%
Rheumatology			13	26	20	21	32	29	141	1.5%
Sleep Medicine						12	5	11	28	0.3%
Toxicology		2	19	15	14	8	14	13	85	0.9%
Traumatic Brain Injury					8	42	63	52	165	1.8%
Urology				6	69	108	114	94	391	4.3%
Other Specialties		7	61	124	178	185	180	173	908	10%
Totals	331	731	903	1,054	1,459	1,653	1,654	1,364	9,149	

Detailed Summary - Specialties Without Formal Groups

Specialty	Other Specialty Summary By FY							Program Totals	% Consults Program
	2005 Totals	2006 Totals	2007 Totals	2008 Totals	2009 Totals	2010 Totals	2011 Totals		
15-6 Investigation			1				0	1	0.1%
Admin/Awards				3	2	1	2	6	1%
Allergy	2	1	2	3	8	10	24	26	3%
Dental				1				1	0.1%
Diving				1		0	0	1	0.1%
Endocrinology	1	4	12	16	26	13	14	72	8%
Flight Medicine			1			5	1	6	0.7%
Gastroenterology		2	13	34	39	30	19	118	13%
General Surgery			2	3	7	3	4	15	2%
Hematology			4	7	15	19	10	45	5%
Judge Advocate General			2				0	2	0.2%
Line of Duty				1			0	1	0.1%
Medical Translation				1			0	1	0.1%
Neurology	1	10						11	1%
Neurosurgery		4	5	3	3	3	3	18	2%
Nutrition			1				1	1	0.1%
OB-GYN		2	14	25	16	17	14	74	8%
Oncology			3	6		4	0	13	1%
Oral Pathology	1	2	4	4				11	1%
Orthopedics		14	12					26	3%
Otolaryngology		2	16	28	45	50	51	141	16%
Pathology				1	1		0	2	0.2%
Pharmacy			2	2			1	4	0%
Plastic Surgery		1	1		1	2	0	5	0.6%
Preventive Medicine	1	1						2	0.2%
Psychiatry / Mental Health			1	6	5	8	11	20	2%
Pulmonary Diseases	1	1	4	16	8	7	10	37	4%
Radiology		2	3	13	7	3	4	28	3%
Speech Pathology		1				0	1	1	0.1%
Surgery				1	1			2	0.2%
Traumatic Brain Injury			2	1				3	0.3%
Urology*		13	16					29	3%
Vascular Surgery		1	3	2	1	3	2	10	1%
Veterinary Medicine						1	1	1	0%
Total	7	61	124	178	185	180	173	735	

Includes consultations before a formal teleconsutation group was established

Most commonly requested specialties not organized into a formal call team

Detailed Summary – Deployed Provider's Location

	Location of Referring Physician									
	2004 Totals	2005 Totals	2006 Totals	2007 Totals	2008 Totals	2009 Totals	2010 Totals	2011 Totals	Program Totals	% Consults Program
Major Facilities >100 Consults	286	682	827	1,008	1,378	1,586	1,570	1,313	8,650	95%
Afghanistan	6	80	127	131	160	346	610	571	2,031	22%
CONUS		20	17	19	26	16	37	19	154	2%
Djibouti				18	20	46	10	34	128	1%
Egypt (MFO)	1	22	16	11	3	26	14	48	141	2%
Iraq	197	477	570	755	1,059	905	621	379	4,963	54%
Kuwait	64	52	32	20	15	62	65	73	383	4%
Qatar	2	27	37	32	46	18	37	43	242	3%
US Navy Afloat	16	4	28	22	49	167	176	146	608	7%
Minor Facilities <100 Consults	45	49	76	46	81	67	84	51	499	5.5%
Albania					1	1		0	2	0.0%
Bahrain						8	4	3	15	0.2%
Belgium								1	1	0.0%
Belize				2		1		0	3	0.0%
Bosnia	25	22	5	2		3		9	66	0.7%
Botswana					1			0	1	0.0%
Canada Navy Afloat								2	2	0.0%
Chad		1		1				0	2	0.0%
Congo					4			0	4	0.0%
Cuba (GTMO)			1		1			0	2	0.0%
Diego Garcia			2	1	3			0	6	0.1%
Ecuador				11				0	11	0.1%
Germany		9	6	2	1	3	1	1	23	0.3%
Ghana					2	1		0	3	0.0%
Guam						1	3	0	4	0.0%
Guatemala					1			0	1	0.0%
Guinea						1		0	1	0.0%
Haiti							4	0	4	0.0%
Honduras		1			22	19	6	5	53	0.6%
Italy			5	1	2	2		0	10	0.1%
Kenya				4		2		0	6	0.1%
Korea			3	1	1	1	6	10	22	0.2%
Kyrgyzstan		2	5		23	3	30	14	77	0.8%
Laos								3	3	0.0%
Mali						1		0	1	0.0%
Mauritania					1		2	0	3	0.0%
Morocco				4				0	4	0.0%
Nepal				2				0	2	0.0%
Okinawa		1			1	1	1	1	5	0.1%
Pakistan	1	2	38			1	2	0	44	0.5%
Peru					1			0	1	0.0%
Philippines				2	2	1		0	5	0.1%
Senegal						1	2	0	3	0.0%
Spain						1		0	1	0.0%
Thailand						1	4	0	5	0.1%
Turkey		2	6		1			0	15	0.2%
Turkmenistant					1			0	1	0.0%
United Arab Emirates			1	6	12	14	17	1	51	0.6%
Yemen								1	1	0.0%
Not Stated / Other	19	9	4	1			2	0	35	0.4%
Total	331	731	903	1,054	1,459	1,653	1,654	1,364	9,149	

Detailed Summary - Patient Branch of Service

	Patient Branch									
	2004 Total	2005 Total	2006 Total	2007 Totals	2008 Totals	2009 Totals	2010 Totals	2011 Totals	Program Totals	% Consults Program
Air Force	11	62	85	95	142	96	124	68	683	7.5%
Army	252	405	431	539	751	888	905	797	4,968	54.3%
Coast Guard						5	7	4	16	0.2%
Marine Corps	8	101	78	149	212	178	174	77	977	10.7%
Navy	18	8	37	30	71	191	161	175	691	7.6%
Contractor	6	27	30	24	40	36	56	31	250	2.7%
Detainee	3	13	23	33	15	27	14	1	130	1.4%
Non-Combatant	13	43	130	87	150	121	132	119	794	8.7%
Other	1	27	38	45	36	51	30	27	255	2.8%
Not Stated/NA	19	45	51	52	42	60	51	65	385	4.2%
Total	331	731	903	1,054	1,459	1,653	1,654	1,364	9,149	

Detailed Summary – US Navy Afloat

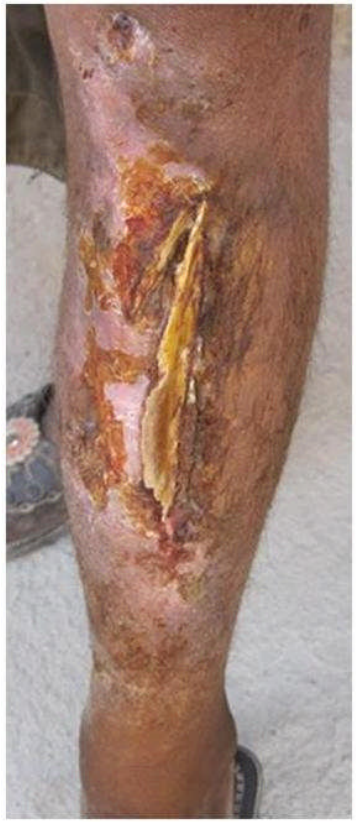
Ship	
USS Abraham Lincoln	USS John C. Stennis
USS Arden	USS John F. Kennedy
USS Bataan	USS John Paul Jones
USS Benfold	USS Kauffman
USS Blue Ridge	USS Kearsarge
USS Bonhomme-Richard	USS Kitty Hawk
USS Boxer	USS Klakring
USS Bunker Hill	USS Leyte Gulf
USS Cape St George	USS Mason
USS Carl Vinson	USS Mitscher
USS Cleveland	USS Monterey
USS Comfort	USS Nashville
USS Comstock	USS Nitze
USS Dubuque	USS Pearl Harbor
USS Denver	USS Ponce
USS Dwight D. Eisenhower	USS Ronald Reagan
USS Enterprise	USS Rushmore
USS Fitzgerald	USS Russell
USS Gary	USS Samuel Roberts
USS George H.W. Bush	USS San Antonio
USS Germantown	USS Taylor
USS Green Bay	USS The Sullivans
USS Gridley	USS Theodore Roosevelt
USS Guston Hall	USS Truman
USS Ingraham	USS Wasp
USS Iwo Jima	USS Whidbey Island

US Navy Float		
Specialty	Number	%
Orthopedics*	161	26%
Dermatology	157	26%
Urology*	43	7%
Ophthalmology	41	7%
Cardiology	29	5%
Neurology*	27	4%
Infectious Diseases	24	4%
Internal Medicine	22	4%
Otolaryngology	22	4%
Psychiatry	11	2%
Rheumatology	11	2%
Allergy	7	1%
OB-GYN	6	1%
Pulmonary	6	1%
General Surgery	5	1%
Nephrology	5	1%
Radiology	5	1%
Dental	4	1%
Gastroenterology	3	0%
Hematology	3	0%
Burn-Trauma	2	0.3%
Neuro-Surgery	2	0.3%
Preventive Medicine	2	0.3%
Sleep Medicine	2	0.3%
Traumatic Brain Injury	2	0.3%
Endocrinology	1	0.2%
Flight Medicine	1	0.2%
Pathology	1	0%
Pediatrics	1	0.2%
Plastic Surgery	1	0%
Toxicology	1	0.2%
Total	608	

*** Includes specialties that were initially labeled as "Other Specialties"**

How To Send A Consult

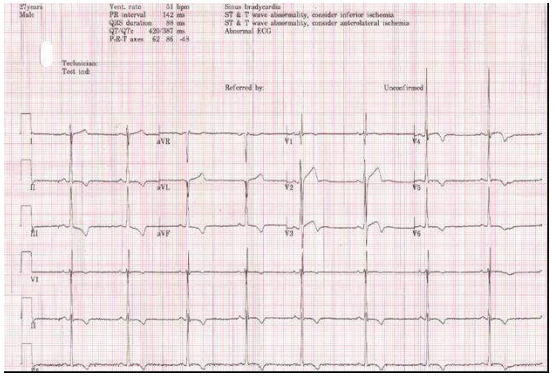
- **Patient History**
  - **When did it start? Days? Weeks? Months? Years?**
  - **Patient symptoms now?**
  - **Chronicity: Getting better? Worse? Staying the same? Spreading?**
  - **What was used to previously treat the patient?**
  - **Effectiveness of previous treatments?**
  - **Laboratory tests results (if any)?**
  - **Your Dx / DDx**
  - **Limitations you have in managing the patient such as medications, procedures, laboratory tests, etc**



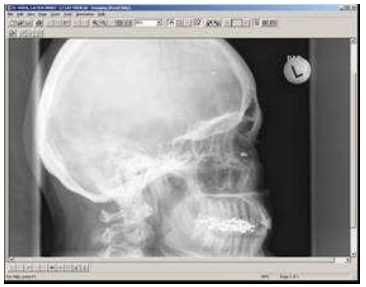
Chronic Hematogenous Osteo with MRSA

How To Send A Consult

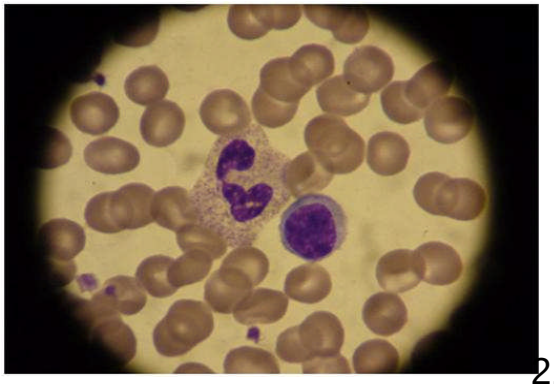
- **Patient Demographics: branch of service, age, and gender. If not U.S. military state their nationality. Identify if contractor detainee, foreign military, etc.**



- **Include digital images if appropriate**
  - **Use the jpeg format for images**
  - **Check images before transmitting**
  - **Usually 3 to 5 images is all we need**
  - **When in doubt, overload us with images**



- **Other attachments:**
  - **PDFs of EKGs**
  - **JPEGs of radiographs**
  - **Copies of laboratory and pathology reports**
  - **Do not send DICOM images**
  - **Do not send photos in RAW format**



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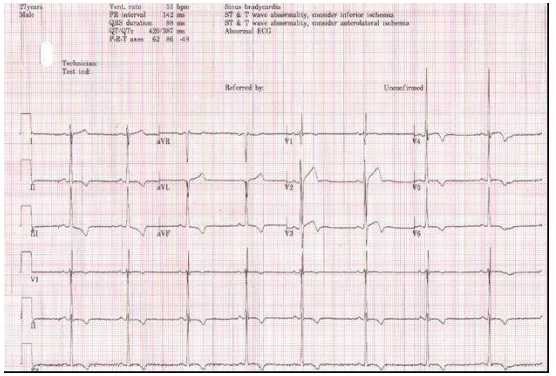

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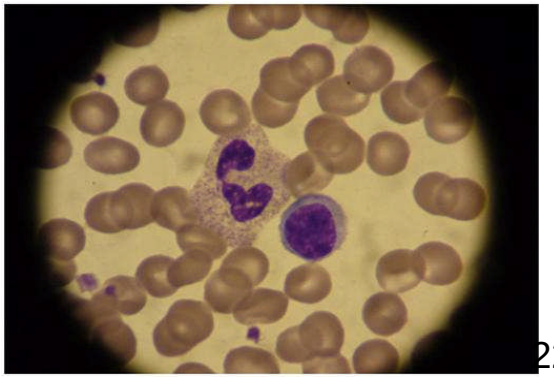
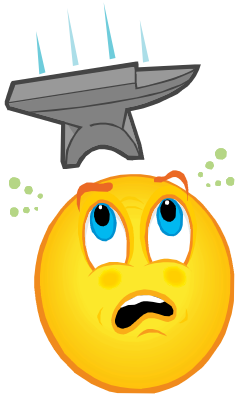
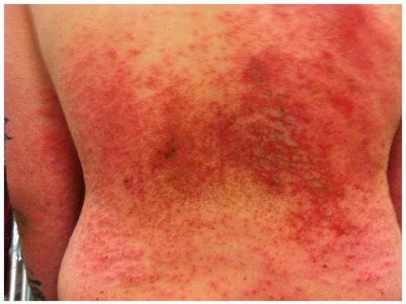


How To Send A Consult



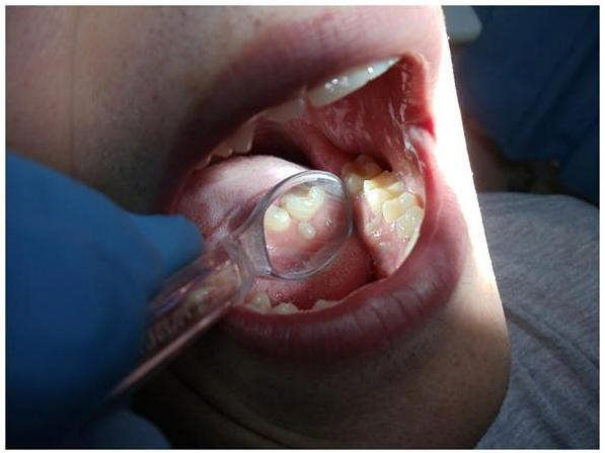
- Do not include any patient identifying information
  - ➢ Do not include the patient's name or SSN
- Try to limit one patient per teleconsultation
- If you send a consult and later need additional assistance send the teleconsultation to the generic email address of the specialty and not to the consultant who answered your consult
  - ➢ Most consultants are on a call-roster and look for consults during the period they are on-call
  - ➢ Most delete the consult after they have answered it
  - ➢ Project Manager makes an MSWord file for each consult
  - ➢ When a reconsult is sent, the Project Manager transmits the file to the on-call consultant



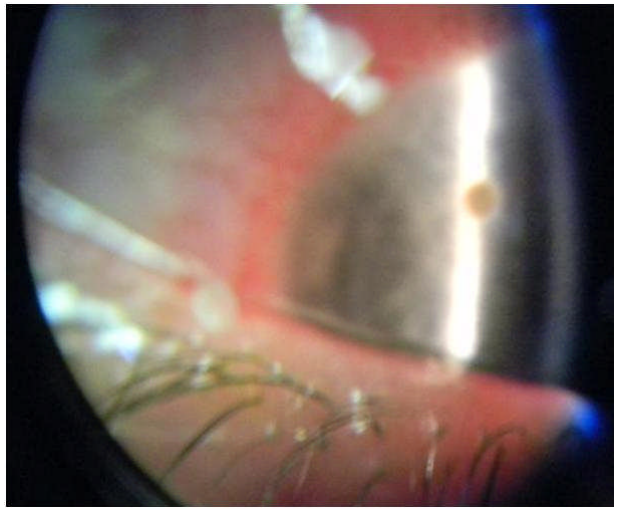
Atopic Dermatitis

How To Send A Consult

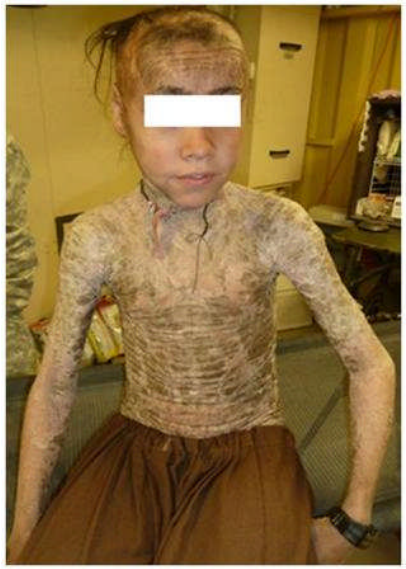
- **Each teleconsultation group has a large number of consultants who monitor the email**
- **It is common for you to receive an “Out-of-Office” or a “Full Inbox” reply from one or two consultants**
- **If the entire email comes back to you as “Undeliverable” email the project administrator: chuck.lappan@us.army.mil**



Extra Tooth



Foreign Body



Lamellar Echythosis

Problems

- **Problem**
  - ➢ **Army provider does not inform their Information Management Directorate they are deploying**
    - ✓ **Provider uses their AKO email address**
    - ✓ **Consultant replies to the AKO address**
      - ❑ **Outlook directs the reply to the MTF email address**
      - ❑ **Deployed provider is not monitoring and does not receive the recommendation**
      - ❑ **~10 to 15% of all consultations from Army providers**

john.doe99@amedd.army.mil
Not john.does99@us.army.mil

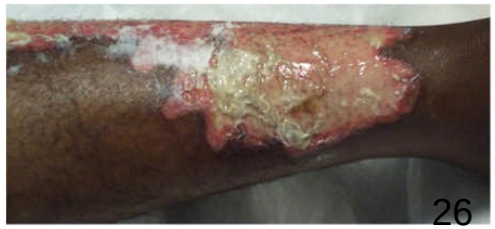
- **Solution**
  - ➢ **Project Manager retransmits recommendation placing @mail after the providers name – i.e. john.doe99@mail.us.army.mil**

Problems

- **Problem**
  - **Provider does not "uncheck" the automatic forwarding feature of their AKO account**
    - ✓ **Consultant's recommendation is routed to the providers AKO account which is forwarded to another military email account**
    - ✓ **If the other account is active (amedd.army.mil) then the consultant cannot contact provider**

- **Solution**
  - **Project Manager locates another provider in the same area and asks them to forward the consultant's recommendation, inform the original provider of their email problem, and how to fix it.**

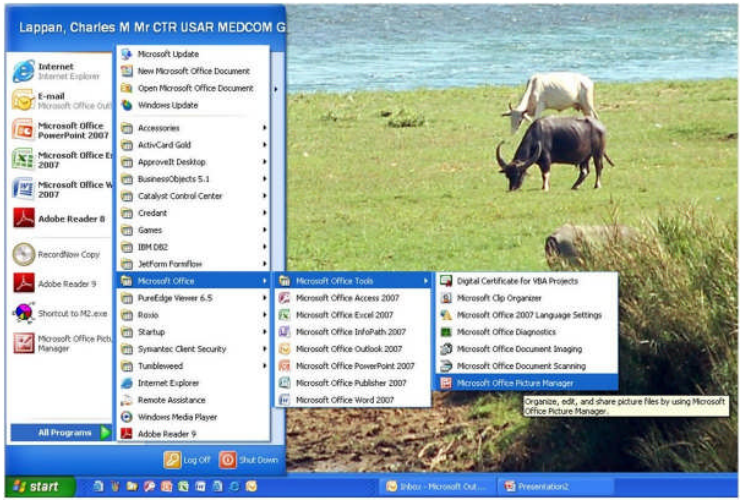
Scalding Water



Problems

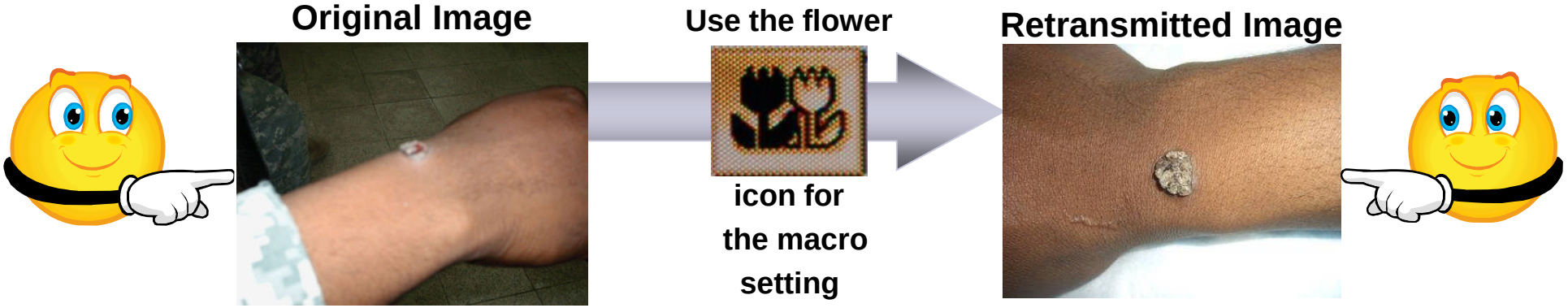
- **Problem**
  - **MTF blocks email because it exceeds size limitation**
    - ✓ **Size limitations varies greatly from 5 to 60+ mB**
  - **Providers have hard time uploading images > 2 mB**

- **Solutions**
  - **Instruct the provider how to set the camera resolution to 1 or 2 mB**
  - **Instruct the provider how to use Picture Manager to compress images**
  - **Referral Manager compresses large images and retransmits**



Problems

- **Problem**
  - **Provider submits digital photographs which are out of focus and / or "inadequate for a diagnosis"**
- **Solution**
  - **Consultant either provides a recommendation based on the patient history or asks for new images**
  - **Consultant or Project Manager emails the referring provider suggestions on how to take better images**



Verruca vulgaris

Everything

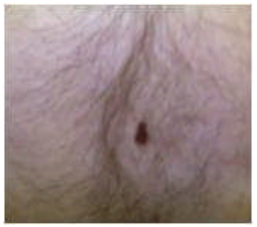
You Need To Know

About Digital Photography

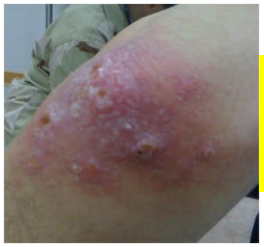
For the Teleconsultation Program

In 6 Slides

Digital Cameras



- Image taken with a cell phone camera with poor optics ... “Image inadequate for diagnosis”



- Image taken with Apple 3G iPhone ... Bacterial v r/o Leishmaniasis

- Equipment
  - PC with USB port
  - Internet access
  - Image Viewing/ Management Software
    - ✓ Microsoft Picture Manager
      - ❑ Loaded on all DoD issued computers
  - Cell phones cameras ok if they have good optics

- Recommended Camera Features
  - Rugged ... can take the weather
  - Image Stablization
  - Speed of Operation
  - Aperture F2.8 or better
  - ISO 1600 or better

- Leave your DSL or Interchangeable Lens Camera at home
- Sensors can get dirty requiring expensive cleaning especially in a deployed environment

Digital Cameras

- **DoD USB Prohibition**
  - **Prohibits direct up-load of images from camera via USB cable /card reader**
  - **Approved solution – upload images to a non-network PC**
    - ✓ **Copy to Compact Disk and scan for malware**
    - ✓ **Attached CD to network computer and upload images**

  - **Ask the local Commander / IT for an exception to policy**
  - **"Some" deployed facilities have DoD compliant camera's / software**

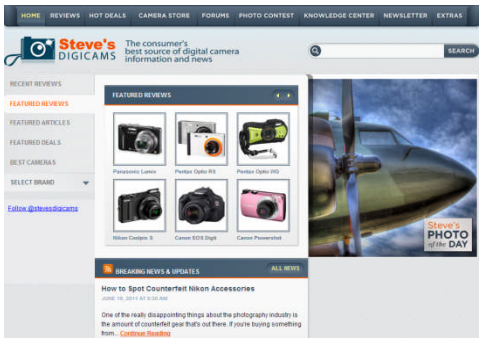
Camera Sites Online

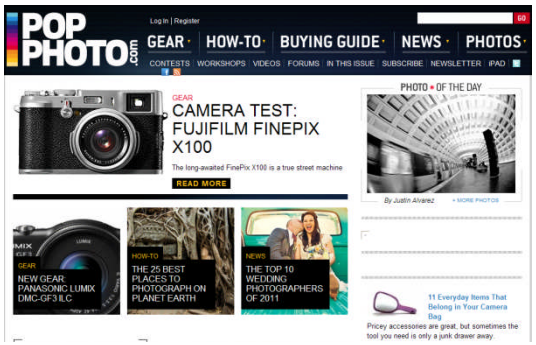
- **Steve's Digicams: http://www.steves-digicams.com**
  - **For reviews of the best cameras click "The Best Cameras"**

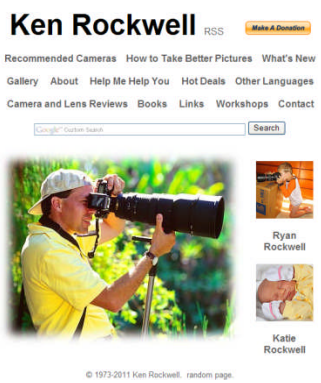
- **Ken Rockwell: http://www.kenrockwell.com**
  - **Click "Technical" for many excellent how-to articles**

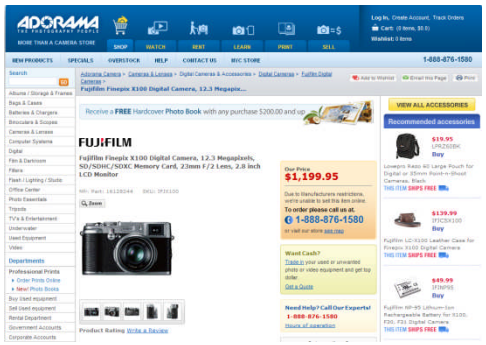
- **Popular Photography: http://popphoto.com**
  - **Excellent articles, product reviews and tons of tutorials**

- **Adorama: http://www.adorama.com and adorama.com/alc/category/AdoramaTV**
  - **Excellent digital photography resource center**







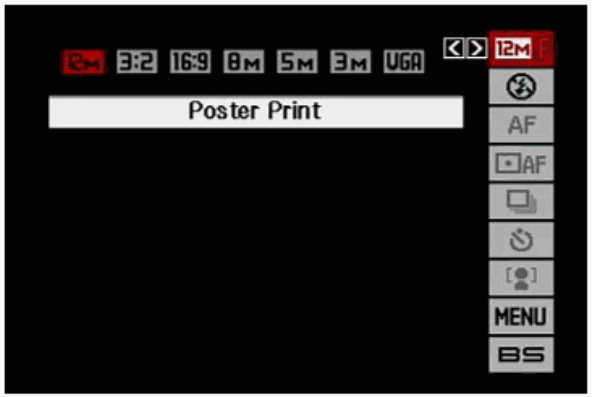


These are just a few of the available websites. Compare the reviews from several before purchasing. Check "User Reviews" to see what others have experienced with the camera.

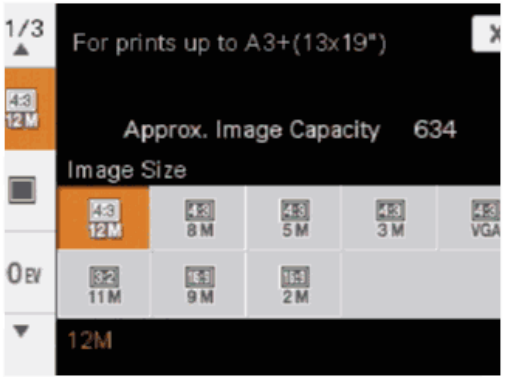
Setting Up the Camera – Image Size

- Go to Set Up menu ... may be called “Image Size”
- Adjust for 1024 x 750 or closest possible setting

Casio EX-H5



Sony DSC-T90

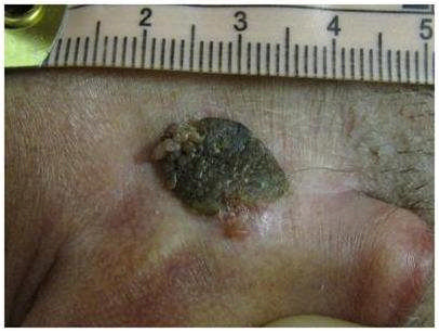


Samsung PL200

Images taken from http://www.steves-digicams.com

Setting Up the Camera – Macro Settings

Canon PowerShot SD880 IS



Seborrheic Keratosis
Deployed Provider - Afghanistan

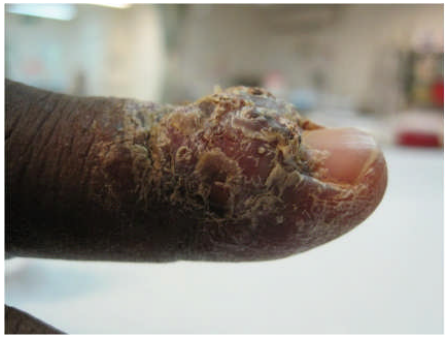
5 mm F: 2.8 Pattern No Flash
1/8th Second Shutter Speed

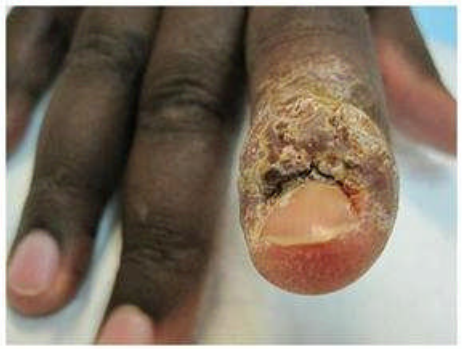
Pentax Optio S1

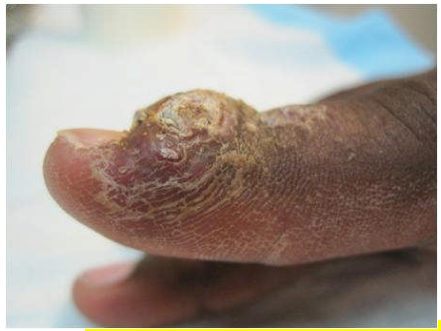
Canon Powershot A3300 IS

Images taken from
http://www.steves-digicams.com

Canon PowerShot SD1200 IS







Paronychia
Deployed Provider - Iraq

6.2 mm F: 2.8 Pattern No Flash
1/25th Second Shutter Speed

Canon uses the letters "IS" to indicate the camera uses Image Stabilization

- Macro setting for a close-up
- Look for the “flower” icon
- For some point and shoot cameras go into the “Scene” mode or click the 4-way selector switch

Focus Lock Technique

- Center the object in the LCD view finder
- Press the shutter button half way down and hold it
- If the camera has a dot, square or brackets in the LCD display it may change from Red to Green when the camera thinks the image is in focus
  - In some cameras the image will suddenly come (blink) into focus
- With the image in focus press the shutter button all the way down in a smooth motion … do not jerk the camera!

Peace Rose
Nikon F2.8 17-35 mm lens
F 2.8 @ 26 mm focal length
Pattern Metering
Nikon D50
Authors Garden

Note the position of the aiming brackets [ ] and the effect on focus

Peace Rose
Nikon F2.8 17-35 mm lens
F 2.8 @ 28 mm focal length
Pattern Metering
Nikon D50
Authors Garden

? Questions ?

July 4th 2011 "Salute to the States," Fort Sam Houston
Nikon D50 with Nikon 17-35 mm lens, Shutter Priority, 26 mm, F3.5, 1/4,000th Sec, Center Weight Average, Burst Mode

Addendum
(If we have time!)

Camera Techniques

Cameras

Manufacturer's Anti-Shake Abbreviations

- **Canon : IS (Image Stabilization)**
- **Casio: Anti-Shake**
- **Nikon: VR (Vibration Reduction)**
- **Sony: Optical SteadyShot (for compact cameras), SuperSteadyShot (SSS for DSLRs)**
- **Panasonic & Leica: MegaOIS**
- **Tamron: VC (Vibration Compensation)**
- **Pentax: SR (Shake Reduction)**
- **Sigma: OS (Optical Stabilization)**

Close-up – Advanced Technique

(for cameras with an "Aperture Priority" setting)

- **This is the manual version of the Macro setting**
- **Turn the flash to the "Off" position**
  - **By turning off the flash you avoid the white-out of the flash**
  - **Ensure the skin area has sufficient indirect lighting**
- **Rotate selector switch to "A" (Aperture Priority)**
- **Set the aperture to the biggest opening (lowest number)**
- **Bring camera close to subject**
- **Press the shutter button half way down and allow the camera to focus**
- **When the image is in focus fully press the shutter button**

Basic Techniques – Taking Images Through A Microscope

- **Non- DSL Cameras**
  - ➢ **Set the camera to the fully automatic (point and shoot) mode**
  - ➢ **Use the rear LCD display for focusing**
  - ➢ **Place the camera over the eye-piece**
  - ➢ **Get as much of the slide area in the LCD as possible**
    - ✓ **Move the camera around and back and forth**
  - ➢ **Press the shutter button half way down and hold**
  - ➢ **When the image is clearly focused fully press the shutter button**

Epithelial Cells (Sputum)

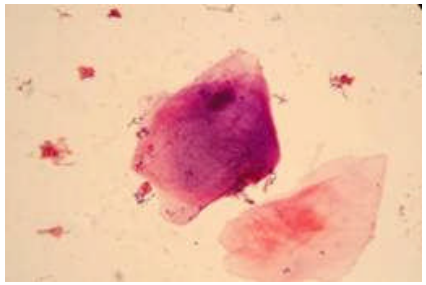


Image Properties
Nikon D50
F-5
38 mm
1/5th Sec
Pattern
EV: -1.0

Bacillus bacteria

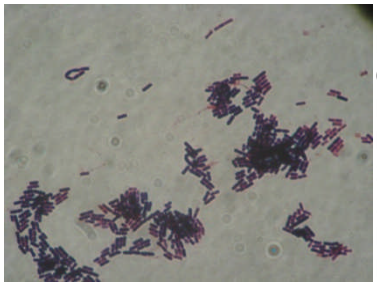


Image Properties
Canon
Powershot SD750
F-4.5
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Pattern
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Gram Negative Bacillus

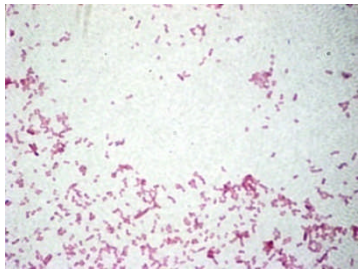


Image Properties
Sony DSC-S650
F-4.8
17 mm
1/40th Sec
Pattern
EV: 0.0

A Short Primer

Using Microsoft Paint

To Make JPEGS

From Radiographs

Saving X-rays As JPEGs Using Microsoft Paint

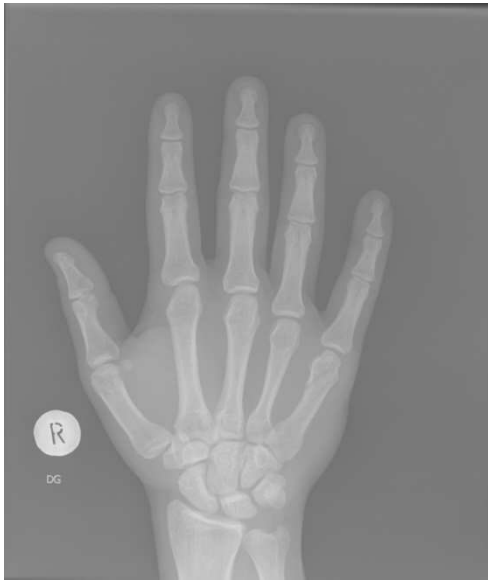
This section shows you how to use Microsoft Paint to take an X-ray or other radiograph on your computer and convert it to a “jpeg” or “Joint Photographic Experts Group” format using Microsoft Office 2007

If your military computer has Microsoft Office Suites most likely you have Microsoft Paint.

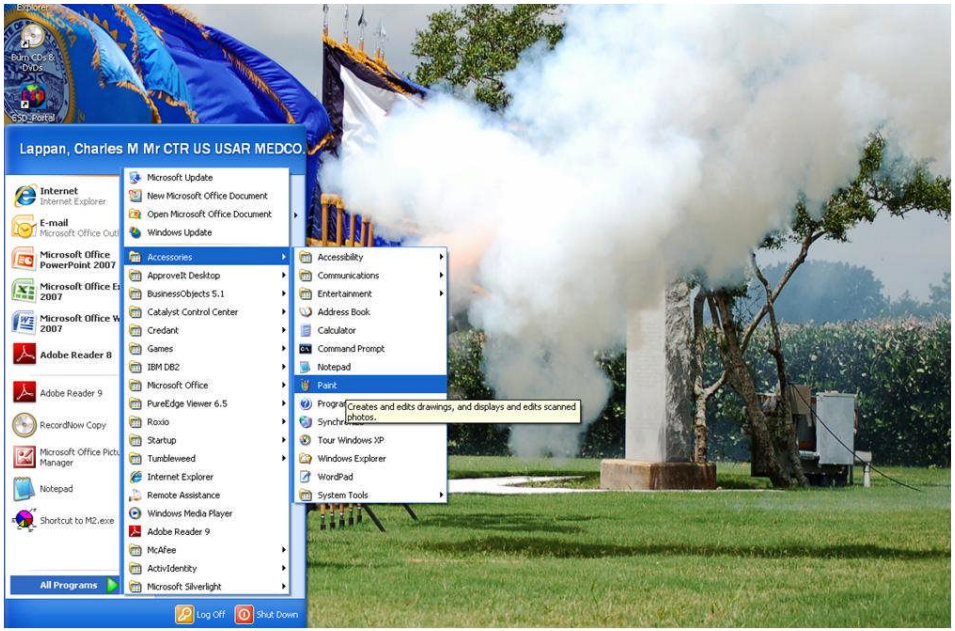
The screenshots in this presentation are from the author’s desktop computer.

For this illustration I had to take the jpeg of a previously sent X-ray to our teleconsultation program. On your computer you will retrieve the image from your radiology program

Pull up the radiograph on your computer monitor



Pull up Microsoft Paint



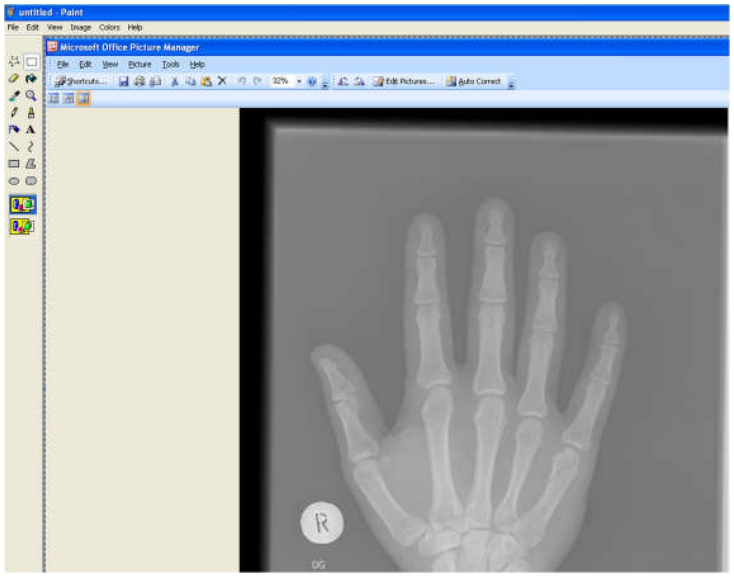
Place the radiograph into your computer's temporary memory by hitting the "Control" key (bottom row of your keyboard) and the "Print Screen" key (top row of the keyboard ... 3rd key from the right

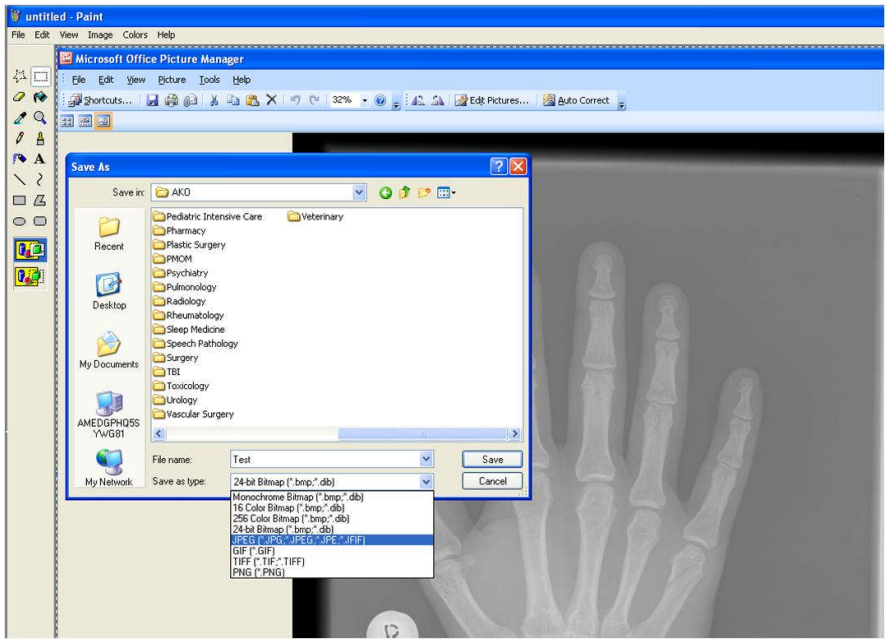
Click on the Paint program (it should be in your system tray)

Hit these two keys at the same time: "Control" key and the letter "V"

This is the shortcut for "Paste"

The image now appears in the Paint Program

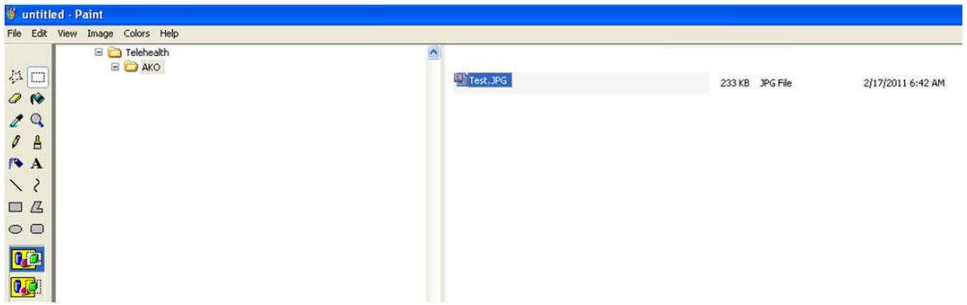




To save the X-ray as a jpeg in the Paint Menu

- **Click "File"**
- **Click "Save As"**
- **The "Save As" box will open**
  - ✓ **In the "Save In" box select the location where you will save the file**
  - ✓ **Give the X-ray a new name in the "File Name"**
  - ✓ **For the "Save as type" select "JPEG"**

The image size is small but it should be acceptable for orthopedics to make a diagnosis

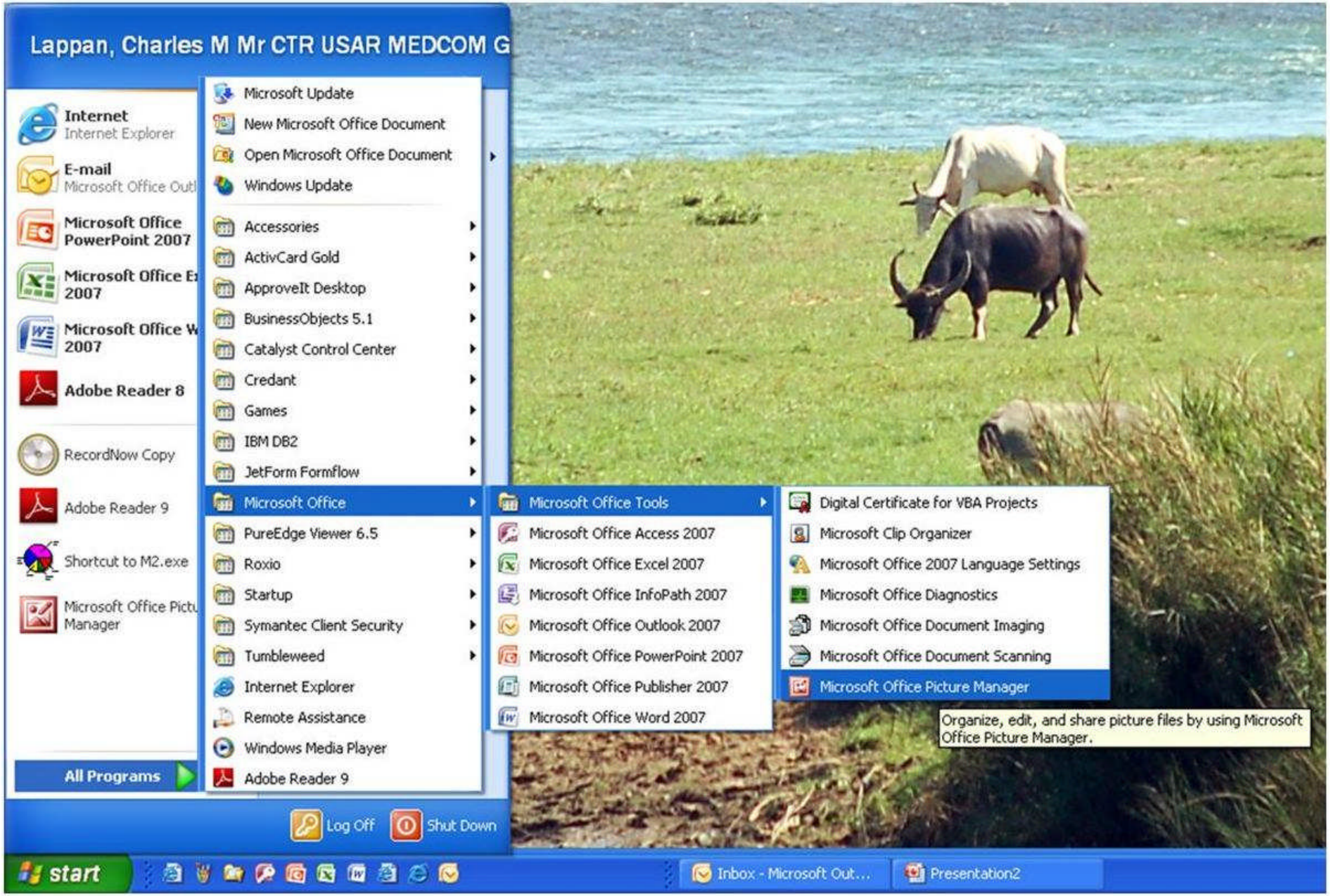


A Short Primer

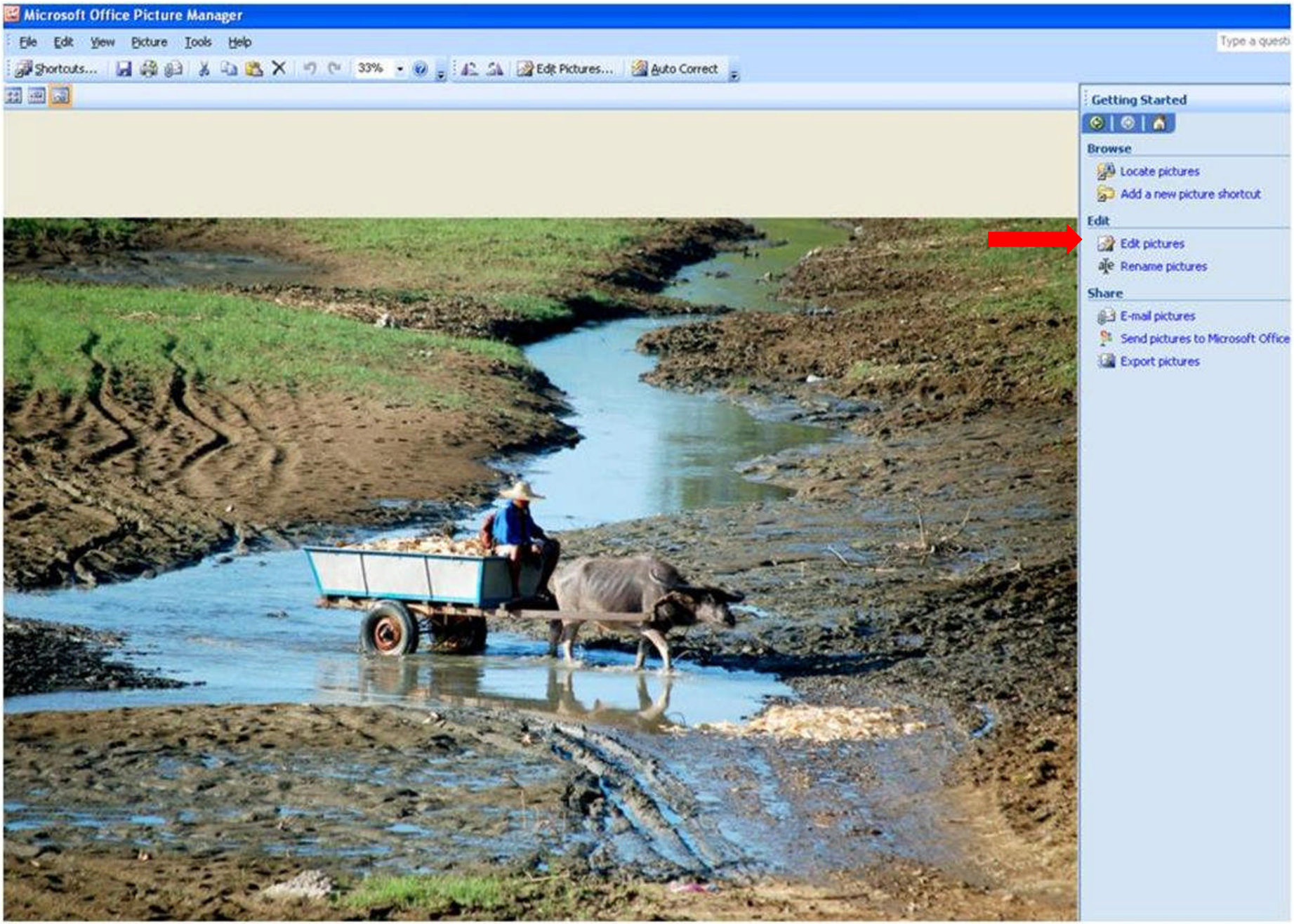
Image Compression

Using Microsoft

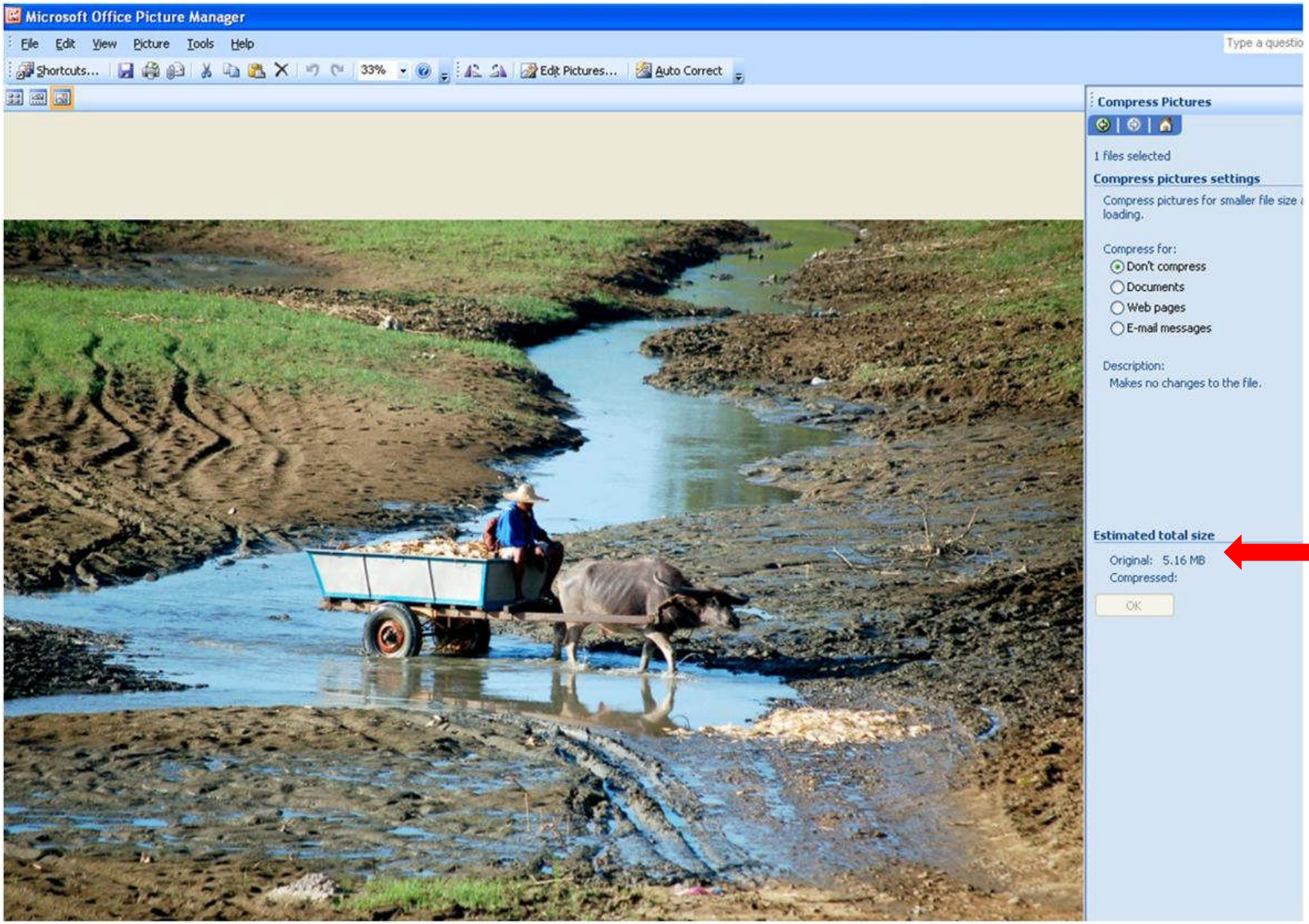
Picture Manager



Locate Picture Manager: All Programs … Microsoft Office … Microsoft Office Tools … Microsoft Office Picture Manager



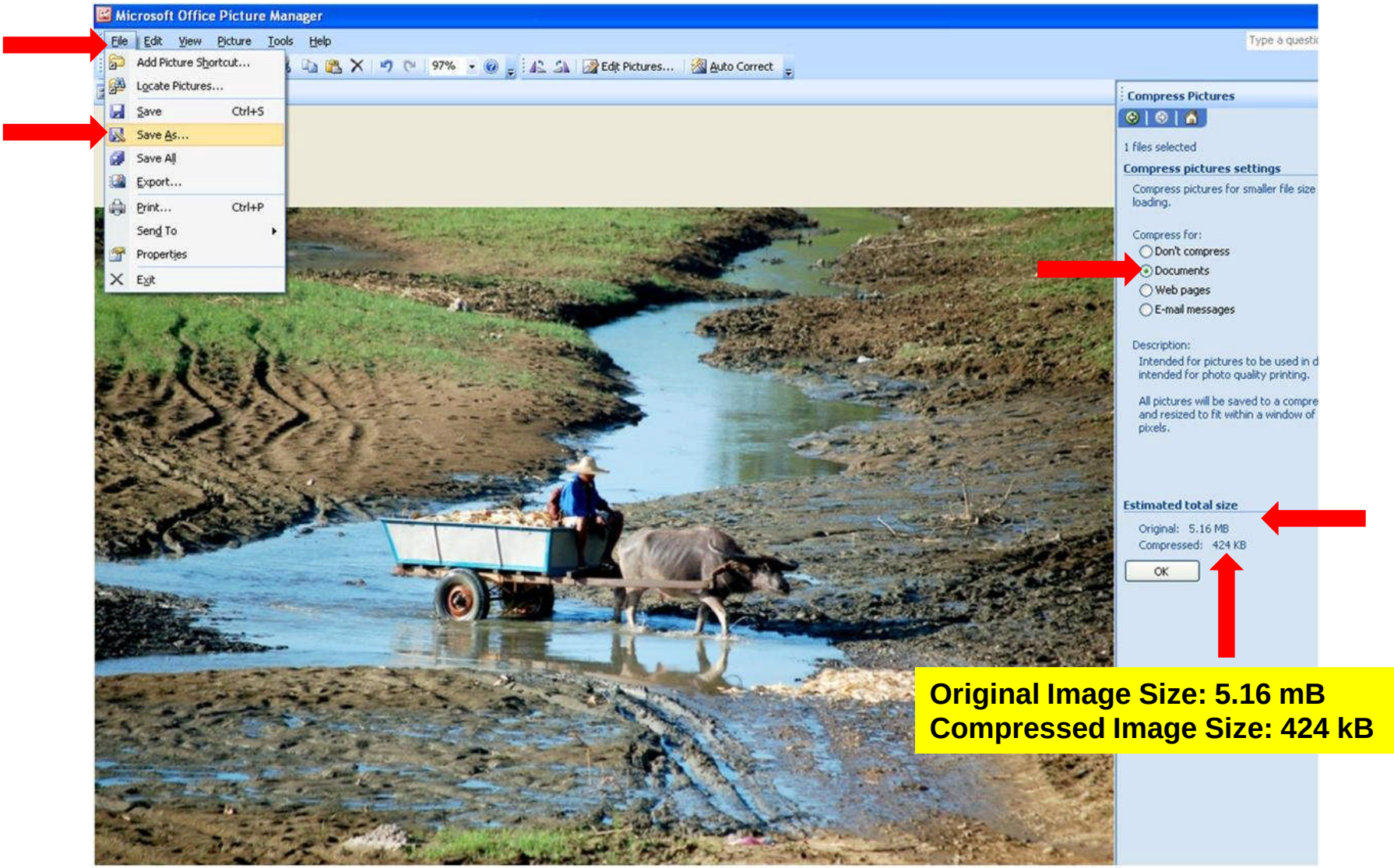
Locate your picture … to compress the picture click “Edit pictures”



The original size of the picture is shown under “Estimated total size”

In our example the Original Picture is 5.16 MB

Since we did not select a compression type the compressed size is blank



Original Image Size: 5.16 mB
Compressed Image Size: 424 kB

We decided to save the picture as a “Document”

To save the image so you can email it Click “File”

Click “Save As” … Select JPEG … Save & Email

If we had selected either Web Pages or E-mail Message the compressed image would have been too small for diagnosis

Case Studies

Over 3,000 case studies grouped by specialty are available either in our AKO web page … for the most updated case studies request a copy of our CD

Case Studies Dermatology

This is an update of a consultation used in the April 2010 Case Studies. It involves a provider deployed to XX. The patient is a young boy who has congenital ichythosis. Two dermatologists answered the consultation. Below is the Follow Up email received in June. The images on the next page show the patient before treatment was started and the images of the patient after being treated for 2 months by the deployed physician

Deployed Physicians Follow Up – June 2010

I am sending you the "Before Treatment" and "Ongoing Treatment" pictures in two different groups.

This child of approximately 10y/o was first seen on 10APR10, and was seen again today after our initial treatment. He was given multiple bottles of ammonium lactate lotion, antihistamine for itching, and some Eucerin cream moisturizer. A consult was sent through you of which we had two responses from CPT XX , and LtCol YY.

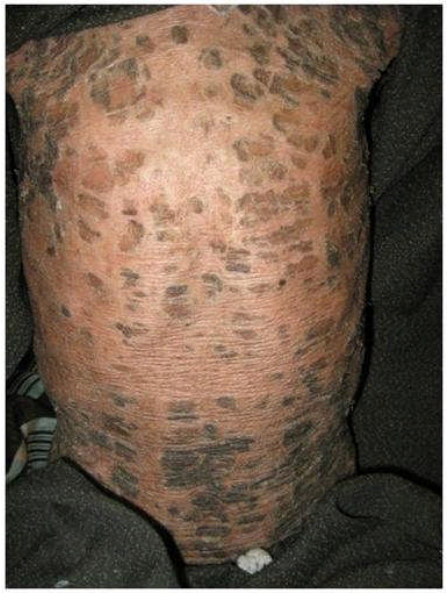
Today we dispensed all the remaining ammonium lactate lotion in stock, half a case of Lubriderm, benzoyl peroxide wash, Hibiclens for cleaning wounds, and bacitracin for applying to wounds after cleansing, Flintstone vitamins, and loratidine 10mg tablets (take 1/2 tab daily), along with a bucket full of candy for all the kids at home. This child has a sibling and a cousin with congenital ichthyosis also. The father who accompanied him today was very pleased with the treatment and very appreciative of the medicines given to him. Our translator passed on some instructions concerning bathing, and using diluted chlorox in the bath once a week. He has been told to avoid overheating, however this is hard in XX. We don't have any urea cream, Donovex or retinoids in stock in the pharmacy, which was another treatment course that was discussed in the emails. Thanks to the dermatologists who have contributed to the treatment of this child. I find this case personally rewarding, in that we have made a difference for this child.

Continued on Next Page

Case Studies Dermatology

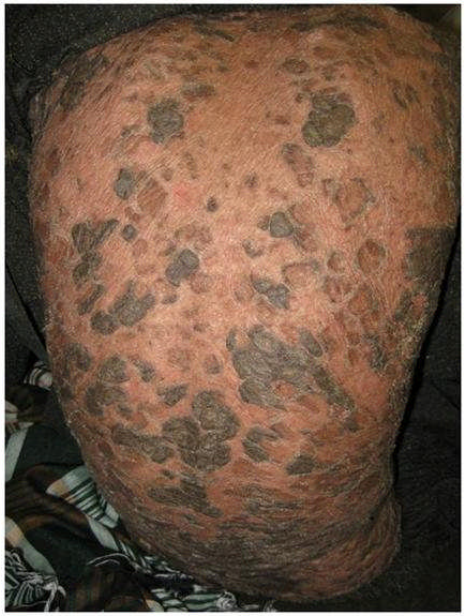
April 2010

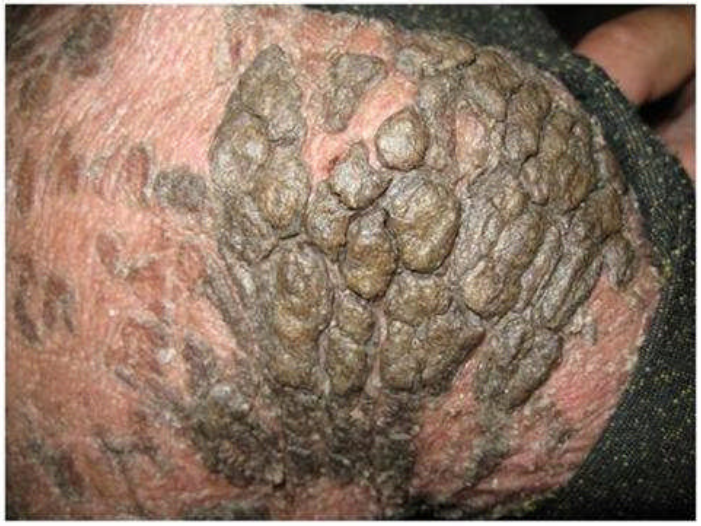
June 2010



April 2010

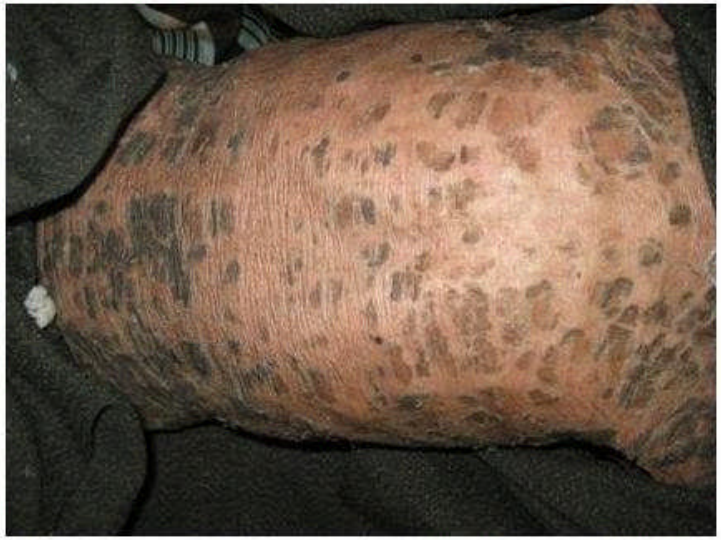
June 2010





Additional Images June 2010

Continued From Previous Page



Mental Health

Referring Physician's Narration

21 y/o SM who was adopted from XX grew up with 2 sisters and 1 brother (estranged) was home schooled by adopted mother thru high school. Seems to be close to his father and states he loves his mother. Joined the XX 1 year ago on his first deployment. SM had been drinking reportedly 8 shots 2 nights sgo and came back to post with 4 buddies where he was repramanded for not attending arabic class he was supposedly forced to sign up to attend. He was "smoked" in his words made to do push-ups and other physical exercises. He admits that during his push-ups that he stopped and said, "I know I might be kicked out of the military but I feel like stabbing myself." This incident took place at 0200 he was supervised until the next morning and then sent to TMC for evaluation. Apparently he has had an episode once before in this unit last August when they were at XX and he voiced ideas of harming himself but admits that he never had a real plan. He was counselled at that time by our present chaplain here on post. He states he has thought before about using his car as his weapon but never while he was in the car he is always distracted by the music, phone or someone with him in the car. there is also reported incidents with cutting behavior over a girfriend and ending that relationship. He states that he used to be very religious which is one of the reasons he could never hurt himself but he met a married woman 10 months ago with 3 children (3, 5, 6) who was abused by her husband and her father that he fell in love with when his family found out about the affair they threw him out the house and he has been living with her apparently in some context. He states he is friendly with her husband and that bothered him but did not stop the relationship, where he apparently got her pregnant but she had a miscarriage. They broke up when he mobilized to XX in March. He performs his duties well per his command but he has been known to have outbursts or temper tandrums. He states he drinks heavily even before he could drink in April (binge drinking) and he has no job currently.
PE: mood is good, affect appropriate, decreased appetite with no appreciable weight loss, thought processes are slow and decision capabilities are decreased but dont know if there may be some learning delays. SM is calm and approachable. speech is clear, concise and approparite AAOx4. No acute cutting or bruising noted. well nourished and physical good shape, grooming and appearance -good.
Progress: SM kept in TMC x 24 hours with battle buddy supervision, started on lexapro 10 mg daily. behavioral mental health tech seeing him daily and chaplain seeing him every evening. Day 1 -SM with better thought process, affect improved. I have him working on 3 goals related to finance, education and family. States he wants to be police officer, told him to write down 3 characteristics of why he believes he would make a good police officer. He is to develop his 3 goals with steps to achieve them, we discussed his ideas today.
IMPRESSION: adjustment disorder with depression and maybe borderline personality disorder.
PLAN: release him back to his unit tomorrow continue 2-3 x per week behavioral counseling and counseling with the chaplain, continue Lexapro 10 mg daily. Have spoke with a commander here that has a brother back in the states that is a clinical psychologist and runs a suicide hotline who will contact his brother to do a phone interview to give his opinion also.

I welcome your recommendations and or suggestions. I don't believe the SM is a danger to himself or others but do believe he has some deep seated issues that have not been revealed.

Mental Health Recommendation

The key issue you addressed in your closing statements: "I don't believe the SM is a danger to himself or others but do believe he has some deep seated issues that have not been revealed." You are certainly in the better position to judge imminent danger. The complicating factors are that you have a young man who has a history of at least episodic alcohol abuse, impulsive self-harm (cutting), unstable personal relationships, hyper-reactivity (rejection sensitive), complicated early childhood (Russian orphanage), and uneven adjustment to military life to date. His age, sex, marital status, background (and possibly family history?), and most notably his episodic alcohol abuse put him at increased risk for acting out his anger or frustration either concerning love or work in suicidal behavior or threats. He may not be an imminent risk to himself now but best to keep him sober. In the bigger picture beyond the important safety issues, his future in the military is really going to depend on his gaining the maturity to deal more effectively with the life stresses in and out of the service and probably keeping better control of his alcohol use before he repeatedly presents with the same concerns making his retention difficult. It is often near impossible for individuals with these challenges to have the luxury of time and support in a reduced stress environment to work on these deep seated issues and gain the coping skills and maturity necessary to establish stable relationships at work and home. Did I mention that this is more difficult when there is episodic alcohol abuse? I don't hear much in the narrative that would lead me to start him on Lexapro or any psychotropic. My emphasis, as I monitored him closely, would be on counseling the dangers of the ETOH and the importance of developing better coping strategies.
Consider ASAP referral.